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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,264	02/23/2004	Young-Geun Jang	678-1168 (P10818)	8870
28249	7590	04/03/2006	EXAMINER	
DILWORTH & BARRESE, LLP 333 EARLE OVINGTON BLVD. UNIONDALE, NY 11553			KIM, WESLEY LEO	
			ART UNIT	PAPER NUMBER
			2617	
DATE MAILED: 04/03/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/785,264	Applicant(s) JANG, YOUNG-GEUN	
	Examiner Wesley L. Kim	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 15-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 2, the examiner believes that the mobile communication system comprises more than one subscriber management databases for storing the service change information. The examiner is confused how a single subscriber database can supply the information to both the first and second MSC.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-2 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luis (U.S. Pub 2004/0242243 A1) in view of Williams (U.S. Pub 2003/0120553 A1).

Regarding Claim 1 and 6, Luis teaches a second MSC (Par.7:5-9 and Par.8:1-4, GMSC1 is the second MSC since it receives a call from the first MSC

at the location of the calling station) for determining a changed service provider of the called terminal based on the called terminal information included in the call request signal transmitted from the first MSC (Par.8;1-6, determines data for the called, i.e. ported subscriber), and transmitting the call request signal to a communication network formed by the determined service provider (Par.8;23-44 and Par.10, the call request gets sent from GMSC1 to GMSC2, which is the determined service provider); and a third MSC, i.e. GMSC2, for transmitting the call request signal received from the second MSC to the called terminal so that the called terminal can communicate with the calling terminal over a communication network formed by the changed service provider (Par.10, once the message is relayed to the HLR2 of the destination network the signaling goes on as in a normal GSM scenario, to the examiner this means that the call is connected from the calling to the called terminal), however Luis **is silent on** a first mobile switching center (MSC) for receiving a call request signal with calling terminal information and called terminal information, determining an initial service provider of a called terminal from the called terminal information, and transmitting the call request signal to a communication network formed by the determined initial service provider of the called terminal.

Williams teaches that it is well known in the art that a call request includes calling terminal information and called terminal information (Par.66;10-12). The examiner notes that Williams does not teach number portability, however the

examiner only wishes to extract the generic teaching that a call request is known to include both calling called terminal information when placing a call.

Luis teaches that a call is received at the GMSC1 of the network that was originally assigned the called subscriber number (Par.7;5-9 and Par.8;1-4). To the examiner it is obvious that the calling terminal is located at another region with its own MSC, i.e. the first MSC, and for a mobile to make a call the call request must be sent through the first MSC, and, in addition, the first MSC must have determined the initial service provider of a called terminal from the called terminal information in order for the second mobile switching center, i.e. GMSC1, to have received a call.

To one of ordinary skill in the art, it would have been obvious to modify Luis with Williams at the time of the invention, such that the first mobile switching center (MSC) receives a call request signal with calling terminal information and called terminal information, determining an initial service provider of a called terminal from the called terminal information, and transmitting the call request signal to a communication network formed by the determined initial service provider of the called terminal, to provide a means of correctly routing the call to the appropriate switching node at the destination recipient network.

**Regarding Claims 2 and 7**, the combination as discussed above teaches all the limitations as recited in claims 1 and 6, and Luis further teaches that the second MSC determines whether a service provider of the called terminal is changed (Par.61;13-18 determines if the called terminal is in the donor network

(i.e. original network) or if the service provider has changed), however Luis is **silent on** a subscriber management database for storing service change information including information relating to an initial service provider of the calling terminal and the called terminal, and information relating to a change in the service provider, wherein the first MSC detects an initial service provider of the called terminal based on the initial service provider information.

Luis teaches that a call is received at the GMSC1 of the network that was originally assigned the called subscriber number (Par.7;5-9 and Par.8;1-4). To the examiner it is obvious that the calling terminal is located at another region with its own MSC, i.e. the first MSC, and for a mobile to make a call, the call request must be sent through the first MSC, and, in addition, the first MSC must have determined the initial service provider of a called terminal from the called terminal information for the second mobile switching center, i.e. GMSC1, to have received a call, via a subscriber database which contains information relating to an initial service provider and it is also obvious that the second MSC has a subscriber database (Par.63;13-18, INPR is the subscriber database which determines if subscriber changed networks).

2. Claims 3-5 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luis (U.S. Pub 2004/0242243 A1) and Williams (U.S. Pub 2003/0120553 A1) in further view of Mazzarella et al (U.S. Pub 2002/0107011 A1).

**Regarding Claims 3 and 8**, Luis and Williams teach all the limitations as recited in claims 2 and 7, however the combination is **silent on** the service

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change information includes serial numbers of the calling terminal and called terminal, a service provider change identification number, a service provider identification number, and a mobile identification number.

Mazzarella teaches that depending on the service provider the information needed to provide for a service change is different (Par.18;9-13). Mazzarella teaches that all of the following are necessary for providing number portability when a service is changed, the serial numbers of the calling terminal and called terminal (Par.16;9-16, i.e. ESN), a service provider change identification number (Par.18;9-11, new service providers ID), a service provider identification number (Par.14;8-12, the current provider is known), and a mobile identification number (Par.18;9-11, the MDN is the mobile identification number), therefore to the examiner it is obvious that a service change information could comprise of all the above.

To one of ordinary skill, in the art, it would have been obvious to modify Luis and Williams with Mazzarella at the time of the invention, since they are from similar search areas, viz. number portability, such that the service change information includes serial numbers of the calling terminal and called terminal, a service provider change identification number, a service provider identification number, and a mobile identification number, since it is obvious that all of the above are necessary for porting numbers between service providers even though they are not explicitly disclosed in every reference pertaining to the topic of

number portability, to provide a means of correctly routing the call to the appropriate switching node at the destination recipient network.

**Regarding Claims 4 and 9**, the combination as discussed above teaches all the limitations as recited in claims 3 and 8, however the combination **is silent on** wherein the first MSC determines the mobile identification number stored in the subscriber management DB, determines the service provider change identification number and the service provider identification number stored in association with the determined mobile identification number, and determines an initial service provider of the called terminal through the service provider change identification number and the service provider identification number.

To the examiner it is obvious the first MSC determines the mobile identification number stored in the subscriber management DB, determines the service provider change identification number and the service provider identification number stored in association with the determined mobile identification number, and determines an initial service provider of the called terminal through the service provider change identification number and the service provider identification number (See Pg.4;3-10 of Current Office Action and Rejection of Claim 3).

**Regarding Claims 5 and 10**, the combination as discussed above teaches all the limitations as recited in claims 4 and 9, and Luis further teaches the second MSC determines whether a service provider of the called terminal is changed based on the service provider change identification number (Par.61;13-



18, analyzes the dialed digits to determine if the service provider is changed, it is obvious that there is an indication of service provider change in the number).

3. Claims 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luis (U.S. Pub 2004/0242243 A1) in view of Himmel et al (U.S. Pub 2003/0134660 A1).

**Regarding Claim 11**, Luis teaches of a mobile terminal for receiving a phone number maintaining service capable of allowing a user to continue to use a previously assigned phone number regardless of a change in service provider (Par.8;1-6, the ported subscriber), however Luis **is silent on** the terminal comprising: a memory for storing NAM (Number Assignment Module) information; a key input module having a plurality of keys, for generating a call request signal input by the user; an RF (Radio Frequency) module for transmitting and receiving a call request signal including called terminal information and calling terminal information; a display for displaying a phone number of a calling terminal, determined from the received calling terminal information; and a controller for transmitting the call request signal to a called terminal through the RF module, and upon receiving a call request signal through the RF module, determining a phone number of the calling terminal from the calling terminal information included in the received call request signal.

Himmel teaches a mobile phone comprises a memory for storing NAM (Number Assignment Module) information (Par.37;13-15); a key input module having a plurality of keys (Fig.2;13), for generating a call request signal input by the user (well known); an RF (Radio Frequency) module for transmitting and

receiving a call request signal including called terminal information and calling terminal information (Fig.2:18 and Fig.2:19, and a call request signal including called and calling terminal information is well known in the art, See rejection of Claim 1); a display for displaying a phone number of a calling terminal determined from the received calling terminal information (Fig.2:12, well known that a display displays a phone number of calling terminal); and a controller for transmitting the call request signal to a called terminal through the RF module (Fig.2:25), and upon receiving a call request signal through the RF module, determining a phone number of the calling terminal from the calling terminal information included in the received call request signal (displaying caller id is very well known in the art).

The examiner notes that Himmel does not does not teach number portability, however the examiner only wishes to extract the generic teaching that a mobile phone comprises all of the components necessary to allow a user to continue to use a previously assigned phone number regardless of a change in service provider.

To one of ordinary skill in the art, it would have been obvious to modify Luis with Himmel at the time of the invention, such that the mobile phone comprises all the components recited in the limitations, to provide a method of allowing a user to continue to use a previously assigned phone number regardless of a change in service provider especially since Luis already teaches that a phone is capable of doing so.

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4. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luis (U.S. Pub 2004/0242243 A1) and Himmel et al (U.S. Pub 2003/0134660 A1) in further view of Mazzarella et al (U.S. Pub 2002/0107011 A1).

**Regarding Claim 12**, Luis and Himmel teach all the limitations as recited in claim 11, however the combination **is silent on** the NAM information including a service provider change identification number, a service provider identification number and a mobile identification number, for receiving a mobile communication service.

Mazzarella teaches that information can be stored in the subscribers mobile station (Par.18, i.e. NAM information). Mazzarella teaches that all of the following are necessary for providing number portability when a service is changed including a service provider change identification number (Par.18;9-11, new service providers ID), a service provider identification number (Par.14;8-12, the current provider is known) and a mobile identification number (Par.18;9-11, MDN is a mobile identification number), for receiving a mobile communication service, therefore to the examiner it is obvious that the NAM information could comprise of all the above.

To one of ordinary skill, in the art, it would have been obvious to modify Luis and Himmel with Mazzarella at the time of the invention, since they are from similar search areas, viz. number portability, such that the NAM information includes a service provider change identification number, a service provider identification number, and a mobile identification number, since it is obvious that

all of the above are necessary for porting numbers between service providers even though they are not explicitly disclosed in every reference pertaining to the topic of number portability, to provide a means of correctly routing the call to the appropriate switching node at the destination recipient network.

**Regarding Claim 13**, the combination as discussed above teaches all the limitations as recited in claim 12, and Mazzearella further teaches the service provider change identification number is updated in the memory each time a service provider to which the mobile terminal has subscribed is changed (Par.23).

**Regarding Claim 14**, the combination as discussed above teaches all the limitations as recited in claim 13, and Mazzearella further teaches the controller determines the service provider change identification number from the calling terminal information (Par.23, the service provider change identification number is sent to mobile so the service provider change identification is known, i.e. determined by the controller), determines a changed service provider identification number based on the detected service provider change identification number (Par.23, the mobile now knows, i.e. determines, the changed service provider id based on the OTA commands with the new carrier information), and determines a phone number of the calling terminal by combining the changed service provider identification number with the mobile identification number included in the calling terminal information (determining a phone number of the calling terminal, i.e. caller id, is well known in the art).

***Allowable Subject Matter***

Claims 15-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter:

Claim 15 recites the service provider change identification number has two digits, a first digit indicates addition or subtraction on the service provider identification number and a second digit indicates a weight for performing addition or subtraction on the service provider identification number. These claims comprise a particular combination of elements, which is neither taught nor suggested by the prior art.

Claims 16-18 are dependent on objected claim 15.

***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley L. Kim whose telephone number is 571-272-7867. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WLK



GEORGE ENG  
SUPERVISORY PATENT EXAMINER